OBJECTIVES: Patients with allergic asthma not well controlled on pharmacotherapy constitute a significant cost to society, whilst having reduced quality of life. Allergy immunotherapy tablets for sublingual administration (SLIT-tablets) have been developed as an effective, well tolerated and convenient treatment modality, suitable for home treatment. The purpose of this analysis was to investigate cost-effectiveness of the SQ® HDM SLIT-tablet in a population with allergic asthma that is not well controlled, despite use of pharmacotherapy. **METHODS:** A multicentre, double-blind, randomised, placebo-controlled clinical trial with the SQ® HDM SLIT-tablet (ClinicalTrials.gov: NCT01433523) has shown statistically significant improvements for all efficacy endpoints in allergic asthma, including improvement in health-related quality of life. A cost-utility analysis was performed using a decision tree structure and data taken from the SQ® HDM SLIT-tablet clinical trial, including SF-36 and health care utilisation data. Long-term efficacy data was limited, and therefore conservative assumptions were adopted, framed by expert advice. As basis for the analysis, German preference weights and costs were applied and a 9-year time horizon adopted. Uncertainty around efficacy assumptions was explored by sensitivity analyses. **RESULTS:** The SQ® HDM SLIT-tablet was cost-effective compared with pharmacotherapy, in the treatment of allergic asthma (ICER<15,000 €/QALY). During sensitivity analysis, model results were sensitive to changes in input parameters, particularly in relation to long-term effectiveness. This indicates the importance of establishing long-term outcomes following treatment with the SQ® HDM SLIT-tablet. **CONCLUSIONS:** In the base case analysis, SQ® HDM SLIT-tablet proved to be cost-effective in the treatment of allergic asthma, compared to placebo. Conservative efficacy assumptions were adopted for the analysis, and therefore, the true benefits of the treatment may be underestimated.

PRS54

RECENT TRENDS IN ANAPHYLAXIS-RELATED HOSPITALIZATION IN THE UNITED STATES

Candrilli S, Kurosky SK

RTI Health Solutions, Research Triangle Park, NC, USA

OBJECTIVES: Anaphylaxis is a severe, often life-threatening, allergic reaction (commonly to foods, insect stings, and medications), frequently requiring immediate medical attention. This study examined recent trends of anaphylaxis-related hospitalization in the United States (US). **METHODS:** Study data were drawn from the Healthcare Cost and Utilization Project's 2001-2012 National (Nationwide) Inpatient Samples (NIS), a nationally representative database of hospital discharges in the US. Anaphylaxis-related hospitalizations were identified using a modification of a previously published algorithm (Walsh et al, 2013); this algorithm evaluates diagnosis codes on each record to identify anaphylaxis-related hospitalizations. In addition to quantifying the rate of hospitalization (per 100,000 US population), length of stay (LOS) and total costs for such hospitalizations were evaluated. Overall estimates, as well as by age group, were generated. **RESULTS:** Across all age groups, the rate of anaphylaxis-related hospitalizations increased by ~62% between 2001 and 2012, from 2.4/100,000 US population in 2001 to 3.8/100,000 in 2012. In general, annually the greatest rate was among those 65-84 years old, although the greatest rate observed was for those 85+ years in 2012, at 8.0/100,000, with rates among this age group steadily increasing over time. Among all anaphylaxis-related hospitalizations, the mean total cost (in 2014 US dollars) increased by more than 55%, from $12,508 in 2001 to $19,420 in 2012. The mean LOS across all anaphylaxis-related hospitalizations increased by >1 full day, from 3.7 days in 2001 to 4.9 days in 2012. **CONCLUSIONS:** Since the early 2000s, rates of anaphylaxis-related hospitalization in the US have increased, with the mean LOS and cost per stay increasing as well. Healthcare decision makers should be aware of these data as they plan for allocation of resources used to treat anaphylaxis.

RESPIRATORY-RELATED DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PRS55

MEASURING GENERIC HEALTH-RELATED QUALITY OF LIFE AND IMPACT OF HEALTH RESOURCE UTILIZATION IN ADULTS WITH CYSTIC FIBROSIS

Yarlas A[1], O'Callaghan L[2], Lopes V[1], Suthoff E[2], Wagener J[3]

[1]*Optum Incorporated, Lincoln, RI, USA,* [2]*Vertex Pharmaceuticals Incorporated, Boston, MA, USA,* [3]*University of Colorado, Aurora, CO, USA*

OBJECTIVES: Compare generic health-related quality of life (HRQL) between adults with and without cystic fibrosis (CF) to assess disease burden and to evaluate whether HRQL varies by level of health resource utilization (HRU) among adults with CF. **METHODS:** Analysis sample included adult respondents to the 2013 National Health and Wellness Survey from the EU5 countries (France, Germany, Italy, Spain and UK) and the US. We measured HRQL using the Short Form (SF)-12v2 and its derived utility index, the SF-6D; we measured HRU using self-reported frequency of hospital/emergency room (ER) visits over the preceding 6 months. Analysis of variance models compared mean HRQL scores of CF versus non-CF respondents (non-CF mean scores were weighted to match the CF group's age and sex distributions). Mann-Whitney tests assessed differences in HRQL between CF respondents with 0 (No ER/Hospitalization) versus ≥1 ER/hospital visits (Any ER/Hospitalization). We calculated Cohen's d effect sizes (ES) to describe the magnitude of between-group differences in mean HRQL scores. **RESULTS:** Seventy-nine of 75,000 US and 109 of 62,000 EU5 respondents self-reported CF. Mean scores were lower for CF versus non-CF respondents for all HQRL domains (P<0.001); differences in physical (PCS) and mental component summaries (MCS) and SF-6D scores had ES of 0.66, 0.55, and 0.77, respectively. Mean scores of CF respondents with Any ER/Hospitalization were lower than mean scores of CF respondents with No ER/Hospitalization for PCS (P<0.001; ES=0.67) and SF-6D (P<0.001; ES=0.58), while MCS scores were comparable (P=0.713; ES=0.16). **CONCLUSIONS:** Results indicate a substantial burden of CF disease on both mental and physical HRQL. Furthermore, within adults with CF the SF-12v2 can discriminate between those with ER/hospital utilization versus those without on PCS and SF-6D, but not MCS. This suggests that SF-12v2 can aid in quantifying HRQL benefits from interventions that may reduce ER/hospital utilization in adults with CF.

PRS56

ASSESSING COPD PATIENTS BURDEN OF DISEASE IN A FOLD-IN-FOLD-OUT DISCRETE CHOICE EXPERIMENT

Goossens LM[1], Stolk EA[1], Donkers B[1], Boland MR[2], Rutten-van Mölken MP[1]

[1]*Erasmus University Rotterdam, Rotterdam, The Netherlands,* [2]*University of Oxford, Oxford, UK*

OBJECTIVES: The Assessment of Burden of COPD (ABC) tool evaluates and visualizes the health status of patients with chronic obstructive pulmonary disease (COPD). This tool may be used during consultations to monitor the burden of COPD and to adjust treatment. The ABC tool has items in 5 dimensions: symptoms, limitations, mental status, exacerbations, and fatigue. The aim of our study was to determine the burden of each of 15 elements in the ABC questionnaire. **METHODS:** A discrete choice experiment (DCE) was conducted using telephone-assisted personal interviews with 279 COPD patients. They were presented 13 sets of two patients, and decided which patient was in the worst health state. In order to make the choice task feasible despite the large number of 15 attributes, we generated an efficient partial profile design, that kept attributes in some dimensions constant and all at the same level (fold in), while varying the attributes in other dimensions (fold out). This reduced the burden on respondents by having them assess some attributes combined in categories, instead of as separate attributes. Multinomial logit was used to analyze the data. **RESULTS:** Patients were considered to be in worst health if they had high levels of fatigue, exacerbations, anxiety, breathlessness at rest and limitations in moderate physical activities. These factors had three to five times as much impact on the burden of disease as lower levels of these attributes and other limitations. Coefficients were very small and/or statistically insignificant for breathlessness during physical activity, limitations on strenuous activity, coughing, small numbers of exacerbations, and most mental attributes. **CONCLUSIONS:** It is possible to administer cognitively complicated DCE questionnaires using a fold-in-fold-out design. COPD-patients seem to accept being unable to perform strenuous activities. Gains in well-being can primarily be achieved by focusing on patients' ability to lead a relatively normal everyday life.

PRS57

MAPPING THE ST GEORGE'S RESPIRATORY QUESTIONNAIRE TO THE EUROQOL 5 DIMENSIONS: A STUDY IN PATIENTS WITH IDIOPATHIC PULMONARY FIBROSIS

Freemantle N[1], Wilson A[2], Fisher M[3]

[1]*University College London, London, UK,* [2]*University of East Anglia, Norwich, UK,* [3]*InterMune, London, UK*

OBJECTIVES: Idiopathic pulmonary fibrosis (IPF) is a rare and fatal lung disease. EQ-5D utilities, an important consideration for cost-effectiveness analysis, are not commonly reported in IPF clinical trials. On the other hand, the St George's Respiratory Questionnaire (SGRQ) is the most extensively used patient reported outcome measure in IPF patients. The objective of this study was to develop a mapping algorithm from the total SGRQ score to obtain EQ-5D utilities. **METHODS:** Data were analysed from a double-blind multicentre study conducted in England and Wales of which 181 IPF patients received either co-trimoxazole or placebo. In total, 202 pairs of data were collected recording both SGRQ and the EQ-5D-3L. Generalised mixed models, accounting for repeated measurements within subjects as residual or generalised random effects, were fit to the data. Explanatory variables were evaluated to aid model fit: Age; BMI; Sex; Forced Expiratory Volume in 1 second (FEV1); Forced Vital Capacity (FVC); and FEV1/FVC. Additionally, the potential non linearity of the relationship between explanatory and response variables was explored by investigating transformations and fitting restricted cubic splines with 4 knot points. Goodness of fit statistics determined the best fitting model. **RESULTS:** The generalised random effects model was the best fitting model. The addition of explanatory variables, use of transformations and investigation of a restricted cubic spline did not improve model fit. The final mapping algorithm, EQ-5D = 1.3246 – 0.01276*SGRQ, was associated with a root mean squared error of 0.1391. Inspection of the scatter plot showed that EQ-5D utilities predicted by the mapping algorithm closely approximated observed values from the study. **CONCLUSIONS:** A mapping algorithm was developed to estimate EQ-5D utilities from the total SGRQ score in IPF patients. This may be useful for researchers conducting cost-effectiveness analysis when EQ-5D utilities are not available from IPF clinical trials.

PRS58

PATIENTS' PRIORITIES FOR TREATMENT IN MODERATE TO SEVERE COPD

Whalley D[1], Hauber AB[2], Crawford SR[1], Posner J[2], Doward L[1], Levitan B[3], Hemels M[4], Valgardsson VS[5]

[1]*RTI Health Solutions, Manchester, UK,* [2]*RTI Health Solutions, Research Triangle Park, NC, USA,* [3]*Janssen Research & Development, LLC, Titusville, NJ, USA,* [4]*Janssen-Cilag A/S, Birkerød, Denmark,* [5]*Janssen-Cilag AS, Oslo, Norway*

OBJECTIVES: Chronic obstructive pulmonary disease (COPD) is one of the most common and burdensome chronic respiratory diseases. This pilot study aimed to explore the priorities of patients with moderate-to-severe COPD in relation to treatment. **METHODS:** Interviews were conducted with 20 patients with self-reported moderate-to-severe COPD. Patients completed a brief best-worst scaling (BWS) exercise comprising 12 questions in which 15 features (benefits, harms, or administration features of a COPD treatment) were presented in sets of 5. On each question, patients indicated the most important and the least important feature when choosing whether to take a treatment. Frequency counts of features selected as the most or least important were used to generate BWS weights for each feature. BWS weights ranged from –1 to +1, with a positive weight reflecting greater importance. **RESULTS:** The sample consisted of 11 males and 9 females, whose age range was 48 to 86 years (median: 65 years). BWS weights showed that the most important features were improved ability to perform daily activities